

Application No.: 10/670,670
Docket No.: PE0673 US CIP

Page 2

Amendments to the Specification

Please amend the first paragraph on page 1 of the application, lines 6-8 as follows:

"This application is a continuation of U.S. Application Serial No. Unknown 10/669,422, filed September 24, 2003, ~~DuPont Ref. No. PE0673-US NA~~, and claiming benefit of Provisional Serial No. 60/413,114, filed September 24, 2002."

The last full paragraph on page 3, lines 26-36:

"Compositions are provided comprising aqueous dispersions of electrically conducting organic polymers and a plurality of nanoparticles. As used herein, the term "dispersion" refers to a continuous medium containing a suspension of minute particles. In accordance with the invention, the "continuous medium" is typically an aqueous liquid, e.g., water. Nanoparticles according to the invention can be inorganic or organic. As used herein, the term "inorganic" means that the nanoparticles are substantially free of carbon. As used herein, the term "organic" means that the nanoparticles are composed substantially of carbon. As used herein, the term "nanoparticle" refers to particles having sizes less than 1000 nanometers (nm)."

Regarding the paragraph bridging pages 7 and 8, page 7, line 37 to page 8, line 10, please enter the following amendment:

"Nanoparticles contemplated for use in the practice of the present invention can be either inorganic or organic and mixtures thereof. Inorganic nanoparticles contemplated for use in the practice of the invention include alumina, silica, metallic nanoparticles, electrically semiconductive metal oxides, and the like. In one embodiment, the electrically semiconductive metal oxide is selected from mixed valence metal oxides, such as zinc antimonates, and the like. In another embodiment, the metallic nanoparticles are molybdenum nanoparticles. Organic nanoparticles contemplated for use in the practice of the invention include colloidal sulfonic acids (such as perfluoroethylene sulfonates, and the like), polyacrylates, polyphosphonates, carbon nanotubes, and mixtures thereof."

Applicants respectfully request entry of the following amendment to the paragraph bridging pages 8 and 9, page 8, line 27 to page 9, line 7:

"In another embodiment of the invention, there are provided buffer layers cast from aqueous dispersions comprising electrically conductive organic polymers and nanoparticles. Both the electrically conducting polymers and the nanoparticles can be readily dispersed in water. Thus, continuous, smooth films can be produced by casting from aqueous dispersions containing electrically conducting polymers and nanoparticles. Invention buffer layers have a reduced conductivity relative to buffer layers of identical composition except the inorganic nanoparticles are absent. Electrical resistivity is inversely proportional to electrical conductivity. Thus, as employed herein, the phrases "high resistance" and "low conductivity"

Application No.: 10/670,670
Docket No.: PE0673 US CIP

Page 3

are used interchangeably with reference to the buffer layers described herein. As used herein, the phrases "high resistance" and "low conductivity" each refer to a conductivity level less than that of a commercially available buffer layers, i.e., less than about 1.0×10^{-3} S/cm. In another embodiment, the ~~resistivity~~ resistivity is preferably less than 1.0×10^{-5} S/cm. Resistivity and conductivity values are typically reported in units of ohm-centimeter (ohm-cm) and Siemens per centimeter (S/cm), respectively. As used herein, conductivity values are reported (using the unit S/cm) rather than resistivity values."